

09/180,209

\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 10:56:25 ON 15 SEP 2000

=> file medline biosis caplus embase lifesci scisearch toxline caba biotechno

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=> a cd40l or (cd40 (w) ligand?)

L1 9535 CD40L OR (CD40 (W) LIGAND?)

=> s l1 and ((three (w) dimensional (w) structure?) or(3d (w) (model? or structure?)

UNMATCHED LEFT PARENTHESIS 'AND ((THREE'

The number of right parentheses in a query must be equal to the number of left parentheses.

=> s l1 and ( (three (w) dimensional (w) structure?) or(3d (w) (model? or structure?)) )

4 FILES SEARCHED...

8 FILES SEARCHED...

L2 3 L1 AND ((THREE (W) DIMENSIONAL (W) STRUCTURE?) OR(3D (W) (MODEL ? OR STRUCTURE?))) )

=> dup rem l2

PROCESSING COMPLETED FOR L2

L3 3 DUP REM L2 (0 DUPLICATES REMOVED)

=> d ti au so kwic 1-3

L3 ANSWER 1 OF 3 SCISEARCH COPYRIGHT 2000 ISI (R)

TI Three-dimensional models of immune cell surface proteins and identification of binding sites

AU Bajorath J (Reprint)

SO JOURNAL OF MOLECULAR MODELING, (JAN 1998) Vol. 4, No. 1, pp. 1-11.

Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010. ISSN: 0946-5023.

AB Immune cell surface proteins belong to protein superfamilies and display only limited sequence identity compared to proteins of known three-dimensional ( \*\*\*3D\*\*\* ) \*\*\*structure\*\*\*, often 30% or less. Therefore, detailed \*\*\*3D\*\*\* \*\*\*structures\*\*\* are difficult to predict, and structure-based sequence analysis and model assessment are particularly important components of the model building process...

STP Keywords Plus (R): HUMAN \*\*\*CD40\*\*\* \*\*\*LIGAND\*\*\* ; E-SELECTIN; ADHESION MOLECULE; CRYSTAL-STRUCTURE; IMMUNOGLOBULIN SUPERFAMILY; RECEPTOR-BINDING; CD6 LIGAND; CARBOHYDRATE-RECOGNITION; P-SELECTIN; DOMAIN

L3 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS

TI Construction and analysis of a detailed three-dimensional model of the ligand binding domain of the human B cell receptor CD40.

AU Bajorath, Juergen (1); Aruffo, Alejandro

SO Structure Function and Genetics, (1997) Vol. 27, No. 1, pp. 59-70. ISSN: 0887-3585.

L3 3 DUP REM L2 (0 DUPLICATES REMOVED)

=> index bioscience chemistry

FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED

FILE 'PAPERCHEM' ACCESS NOT AUTHORIZED

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY

SESSION

27.63

27.78

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI, BIORUNNERS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGS, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 11:00:48 ON 15 SEP 2000

79 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0\* with SET DETAIL OFF.

=> s peitsch m7/au and cd40

0\* FILE ADISINSIGHT

0\* FILE BIOCOMMERCE

8 FILES SEARCHED...

4 FILE BIOSIS

2 FILE BIOTECHNO

2 FILE CANCERLIT

4 FILE CAPLUS

0\* FILE CIN

0\* FILE DRUGLAUNCH

0\* FILE DRUGMONOG2

0\* FILE DRUGNL

4 FILE EMBASE

31 FILES SEARCHED...

1 FILE ESBIODASE

0\* FILE FOREGE

3 FILE LIFESCI

4 FILE MEDLINE

0\* FILE PHAR

0\* FILE PHIC

0\* FILE PHIN

6 FILE SCISEARCH

0\* FILE CBNS

66 FILES SEARCHED...

0\* FILE USAN

9 FILES HAVE ONE OR MORE ANSWERS, 79 FILES SEARCHED IN STNINDEX

=> d rank

F1 6 SCISEARCH

F2 4 BIOSIS

F3 4 CAPLUS

F4 4 EMBASE

F5 4 MEDLINE

F6 3 LIFESCI

F7 2 BIOTECHNO

F8 2 CANCERLIT

AB Limitations of the model are discussed. The current CD40 model predicts structural details beyond the backbone level. Features of the \*\*\*CD40\*\*\* \*\*\*ligand\*\*\* binding site are discussed in conjunction with the results of a previous mutagenesis study.

IT AND BIOPHYSICS; COMPARATIVE PROTEIN MODELING; HUMAN CD40; INTERSPECIFIC AMINO ACID SEQUENCE COMPARISON; INTERSPECIFIC PROTEIN HOMOLOGY; LIGAND BINDING DOMAIN; SEQUENCE-STRUCTURE COMPATIBILITY; \*\*\*THREE\*\*\* \*\*\*DIMENSIONAL\*\*\* \*\*\*STRUCTURE\*\*\* ; TUMOR NECROSIS FACTOR RECEPTOR FAMILY

L3 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS

TI 2 A crystal structure of an extracellular fragment of human \*\*\*CD40\*\*\* \*\*\*ligand\*\*\*

AU Karpusas, Michael (1); Hsu, Yen-Ming; Wang, Jia-Huai; Thompson, Jeff;

Lederman, Seth; Chess, Leonard; Thomas, David

SO Structure (London), (1995) Vol. 3, No. 10, pp. 1031-1039.

ISSN: 0969-2126.

TI 2 A crystal structure of an extracellular fragment of human \*\*\*CD40\*\*\* \*\*\*ligand\*\*\*

AB Background: The \*\*\*CD40\*\*\* \*\*\*ligand\*\*\* ( \*\*\*CD40L\*\*\* ) is a member of the tumor necrosis factor (TNF) family of proteins and is transiently expressed on the surface of activated T cells. The binding of \*\*\*CD40L\*\*\* to CD40, which is expressed on the surface of B cells, provides a critical and unique pathway of cellular activation resulting in antibody isotype switching, regulation of apoptosis, and B cell proliferation and differentiation. Naturally occurring mutations of \*\*\*CD40L\*\*\* result in the clinical hyper-IgM syndrome, characterized by an inability to produce immunoglobulins of the IgG, IgA and IgE isotypes. Results: We have determined the crystal structure of a soluble extracellular fragment of human \*\*\*CD40L\*\*\* to 2 ANG resolution and with an R factor of 21.8%. Although the molecule forms a trimer similar to that...

IT acid sequence; molecular sequence data

IT Miscellaneous Descriptors

HYPER-IMMUNOGLOBULIN M SYNDROME; MOLECULAR MODEL; PROTEIN FOLDING; T CELL MEMBRANE-BOUND FLEIOTROPIC CYTOKINE; \*\*\*THREE\*\*\* - \*\*\*DIMENSIONAL\*\*\* \*\*\*STRUCTURE\*\*\* ; TUMOR NECROSIS FACTOR PROTEIN FAMILY

=> d hait

'HSIT' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):end

=> d hist

(FILE 'HOME' ENTERED AT 10:56:25 ON 15 SEP 2000)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, LIFESCI, SCISEARCH, TOXLINE, CABA, BIOTECHNO' ENTERED AT 10:56:29 ON 15 SEP 2000

L1 9535 S CD40L OR (CD40 (W) LIGAND?)

L2 3 S L1 AND ( (THREE (W) DIMENSIONAL (W) STRUCTURE?) OR(3D (W) (M

F9 1 ESBIODASE

=> d f9

DISPLAY L# IS NOT VALID IN STNINDEX

Answer set was created in a file. Enter DISPLAY HISTORY to see where the answer set was created. Use the File command to change to that file, then display the answer.

=> fild biotechno cancerlit esbiobase

FILD IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> file biotechno cancerlit esbiobase

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY

SESSION

3.15

30.93

FILE 'BIOTECHNO' ENTERED AT 11:05:00 ON 15 SEP 2000

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FILE 'CANCERLIT' ENTERED AT 11:05:00 ON 15 SEP 2000

FILE 'ESBIODASE' ENTERED AT 11:05:00 ON 15 SEP 2000

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=> s peitsch m7/au and cd40

L5 5 PEITSCH M7/AU AND CD40

=> dup rem l5

PROCESSING COMPLETED FOR L5

L6 4 DUP REM L5 (1 DUPLICATE REMOVED)

=> d ti au so 1-4

L6 ANSWER 1 OF 4 CANCERLIT

TI Clinical spectrum of X-linked hyper-IgM syndrome [see comments].

AU Levy J; Espanol-Boren T; Thomas C; Fischer A; Tovo P; Bordigoni P; Resnick

I; Fasth A; Baer M; Gomez L; Sanders E A; Tabone M D; Plantaz D; Etzioni

A; Monafio V; Abirum M; Hammarstrom L; Abrahamsen T; Jones A; Finn A;

Klemola T; DeVries E; Sanal O; \*\*\*Peitsch M C\*\*\* ; Notarangelo L D

SO JOURNAL OF PEDIATRICS, (1997), 131 (1 Pt. 1), pp. 47-54.

Journal code: JLT. ISSN: 0022-3476.

L6 ANSWER 2 OF 4 Elsevier BIOBASE COPYRIGHT 2000 Elsevier Science B.V.

TI CD40Lbase: A database of CD40L gene mutations causing X-linked hyper-IgM

syndrome

AU Notarangelo L.D.; \*\*\*Peitsch M.C.\*\*\* ; Abrahamsen T.G.; Bachelot C.;

Bordigoni P.; Cant A.J.; Chapel H.; Clementi M.; Deacock S.; De Saint

Basile G.; Duse M.; Espanol T.; Etzioni A.; Fasth A.; Fischer A.; Gilani

S.; Gomez L.; Hammarstrom L.; Jones A.; et al.

SO Immunology Today, (1996), 17/11 (511-516)

CODEN: IMTOD8 ISSN: 0167-5699

L6 ANSWER 3 OF 4 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.  
TI Human \*\*\*CD40\*\*\* ligand: Molecular cloning, cellular distribution and  
regulation of IgE synthesis  
AU Gauchat J.-F.; Mazzei G.; Life P.; Henchoz S.; \*\*\*Peitsch M.C.\*\*\* ;  
Aubry J.-P.; Jomotte J.; Bonnefoy J.-Y.  
SO Research in Immunology, (1994), 145/3 (240-244)  
CODEN: RIMME5 ISSN: 0923-2494

L6 ANSWER 4 OF 4 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE  
TI A 3-D model for the \*\*\*CD40\*\*\* ligand predicts that it is a compact  
trimer similar to the tumor necrosis factors  
AU \*\*\*Peitsch M.C.\*\*\* ; Jongeneel C.V.  
SO International Immunology, (1993), 5/2 (233-238)  
CODEN: INIMEN ISSN: 0953-8178

=> d hist

(FILE 'HOME' ENTERED AT 10:56:25 ON 15 SEP 2000)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, LIFESCI, SCISEARCH, TOXLINE, CABA,  
BIOTECHNO' ENTERED AT 10:56:29 ON 15 SEP 2000  
L1 9535 S CD40L OR (CD40 (W) LIGAND?)  
L2 3 S L1 AND ( (THREE (W) DIMENSIONAL (W) STRUCTURE?) OR (3D (W) (M  
L3 3 DUP REM L2 (0 DUPLICATES REMOVED)

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI,  
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,  
CANCERLIT, CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU,  
DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 11:00:48 ON 15 SEP  
2000

SEA PEITSCH M7/AU AND CD40

0\* FILE ADISINSIGHT  
0\* FILE BIOCOMMERCE  
4 FILE BIOSIS  
2 FILE BIOTECHNO  
2 FILE CANCERLIT  
4 FILE CAPLUS  
0\* FILE CIN  
0\* FILE DRUGLAUNCH  
0\* FILE DRUGMONOG2  
0\* FILE DRUGNL  
4 FILE EMBASE  
1 FILE EMBIOBASE  
0\* FILE FOREGE  
3 FILE LIFESCI  
4 FILE MEDLINE  
0\* FILE PHAR  
0\* FILE PHIC  
0\* FILE PHIN  
6 FILE SCISEARCH  
0\* FILE CBNB  
0\* FILE USAN

L4 QUE PEITSCH M7/AU AND CD40

FILE 'BIOTECHNO, CANCERLIT, EMBIOBASE' ENTERED AT 11:05:00 ON 15 SEP 2000  
L5 5 S PEITSCH M7/AU AND CD40

=> s l1 and ( homology (5w) (model? or structure?) )

L10 4 L1 AND (HOMOLOGY (5W) (MODEL? OR STRUCTURE?) )

=> dup rem l10

PROCESSING COMPLETED FOR L10

L11 2 DUP REM L10 (2 DUPLICATES REMOVED)

=> d ti au so l-2

L11 ANSWER 1 OF 2 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE  
TI The role of polar interactions in the molecular recognition of  
\*\*\*CD40L\*\*\* with its receptor CD40  
AU Singh J.; Garber E.; Van Vlijmen H.; Karpusas M.; Hsu Y.-M.; Zheng Z.;  
Naismith J.H.; Thomas D.  
SO Protein Science, (1998), 7/5 (1124-1135), 44 reference(s)  
CODEN: PRICIE ISSN: 0961-8368

L11 ANSWER 2 OF 2 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE  
TI RGD sequences in several receptor proteins: Novel cell adhesion function  
of receptors?  
AU Papadopoulos G.K.; Ouzounis C.; Eliopoulos E.  
SO International Journal of Biological Macromolecules, (1998), 22/1 (51-57),  
33 reference(s)  
CODEN: IJBMDR ISSN: 0141-8130

=> s l1 and ( molecular (5w) (model? or structure?) )

L12 16 L1 AND (MOLECULAR (5W) (MODEL? OR STRUCTURE?) )

=> dup rem l12

PROCESSING COMPLETED FOR L12

L13 11 DUP REM L12 (5 DUPLICATES REMOVED)

=> d ti au so l-11

L13 ANSWER 1 OF 11 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE  
TI Detailed comparison of two \*\*\*molecular\*\*\* \*\*\*models\*\*\* of the  
human \*\*\*CD40\*\*\* \*\*\*ligand\*\*\* with an X-ray structure and  
critical assessment of model-based mutagenesis and residue mapping  
studies  
AU Bajorath J.  
SO Journal of Biological Chemistry, (18 SEP 1998), 273/38 (24603-24609), 42  
reference(s)  
CODEN: JBCHA3 ISSN: 0021-9258

L13 ANSWER 2 OF 11 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE  
TI The role of polar interactions in the molecular recognition of  
\*\*\*CD40L\*\*\* with its receptor CD40  
AU Singh J.; Garber E.; Van Vlijmen H.; Karpusas M.; Hsu Y.-M.; Zheng Z.;  
Naismith J.H.; Thomas D.  
SO Protein Science, (1998), 7/5 (1124-1135), 44 reference(s)  
CODEN: PRICIE ISSN: 0961-8368

L13 ANSWER 3 OF 11 Elsevier BIOBASE COPYRIGHT 2000 Elsevier Science B.V.

L6 4 DUP REM L5 (1 DUPLICATE REMOVED)

=> s l1 and ( (three (w) dimensional (w) structure?) or ((3d or 3(w)d) (w) (model? or  
structure?)) )

UNMATCHED RIGHT PARENTHESIS ')' )'

The number of right parentheses in a query must be equal to the  
number of left parentheses.

=> s l1 and ( (three (w) dimensional (w) structure?) or ((3d or 3(w)d) (w) (model? or  
structure?)) )

L7 2 L1 AND ((THREE (W) DIMENSIONAL (W) STRUCTURE?) OR ((3D OR 3(W)  
D) (W) (MODEL? OR STRUCTURE?))) )

=> d l-2

L7 ANSWER 1 OF 2 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.  
AN 1993:23075529 BIOTECHNO  
TI A \*\*\*3\*\*\* - \*\*\*D\*\*\* \*\*\*model\*\*\* for the \*\*\*CD40\*\*\*

\*\*\*ligand\*\*\* predicts that it is a compact trimer similar to the tumor  
necrosis factors.  
AU Peitsch M.C.; Jongeneel C.V.  
CS Institute of Biochemistry, University of Lausanne, chemin des Boveresses  
155, CH-1066 Epalinges, Switzerland.  
SO International Immunology, (1993), 5/2 (233-238)  
CODEN: INIMEN ISSN: 0953-8178  
DT Journal: Article  
CY United Kingdom  
LA English  
SL English

L7 ANSWER 2 OF 2 CANCERLIT

AN 93200072 CANCERLIT

DN 93200072

TI A \*\*\*3\*\*\* - \*\*\*D\*\*\* \*\*\*model\*\*\* for the \*\*\*CD40\*\*\*  
\*\*\*ligand\*\*\* predicts that it is a compact trimer similar to the tumor  
necrosis factors.

AU Peitsch M.C.; Jongeneel C.V.  
CS Institute of Biochemistry, University of Lausanne, Epalinges, Switzerland.  
SO INTERNATIONAL IMMUNOLOGY, (1993). Vol. 5, No. 2, pp. 233-8.  
Journal code: A15. ISSN: 0953-8178.  
DT Journal: Article; (JOURNAL ARTICLE)  
FS MEDL; L; Priority Journals  
LA English  
OS MEDLINE 93200072  
EM 199305

=> s l1 and ( (three (w) dimensional (w) structure?) or ((3d or 3(w)d) (3w) (model? or  
structure?)) )

L8 2 L1 AND ((THREE (W) DIMENSIONAL (W) STRUCTURE?) OR ((3D OR 3(W)  
D) (3W) (MODEL? OR STRUCTURE?))) )

=> s l1 and ( (three (w) dimensional (w) structure?) or ((3d or 3(w)d) (5w) (model? or  
structure?)) )

L9 2 L1 AND ((THREE (W) DIMENSIONAL (W) STRUCTURE?) OR ((3D OR 3(W)  
D) (5W) (MODEL? OR STRUCTURE?))) )

TI Isolation of differentially expressed genes upon immunoglobulin class  
switching by a subtractive hybridization method using uracil DNA  
glycosylase

AU Sugai M.; Kondo S.; Shimizu A.; Honjo T.  
SO Nucleic Acids Research, (15 FEB 1998), 26/4 (911-918), 50 reference(s)  
CODEN: NARHAD ISSN: 0305-1048

L13 ANSWER 4 OF 11 CANCERLIT

TI Molecular regulation of human IgE synthesis.

AU Worm M.; Henz B.M.

SO JOURNAL OF MOLECULAR MEDICINE, (1997). Vol. 75, No. 6, pp. 440-7.  
Journal code: B8C. ISSN: 0946-2716.

L13 ANSWER 5 OF 11 Elsevier BIOBASE COPYRIGHT 2000 Elsevier Science B.V.

TI Immune regulation by CD40 and its ligand GP39

AU Foy T.M.; Aruffo A.; Bajorath J.; Buhlmann J.E.; Noelle R.J.  
SO Annual Review of Immunology, (1996), 14/- (591-617)

CODEN: ARIMDU ISSN: 0732-0582

L13 ANSWER 6 OF 11 Elsevier BIOBASE COPYRIGHT 2000 Elsevier Science B.V.

TI Classification of mutations in the human \*\*\*CD40\*\*\* \*\*\*ligand\*\*\*

gp39, that are associated with X-linked hyper IgM syndrome

AU Bajorath J.; Seyama K.; Nonoyama S.; Ochs H.D.; Aruffo A.

SO Protein Science, (1996), 5/3 (531-534)  
CODEN: PRICIE ISSN: 0961-8368

L13 ANSWER 7 OF 11 CANCERLIT

TI Molecular, structural, and biological characteristics of the tumor  
necrosis factor ligand superfamily.

AU Gruss H.J.

SO INTERNATIONAL JOURNAL OF CLINICAL AND LABORATORY RESEARCH, (1996). Vol.  
26, No. 3, pp. 143-59.  
Journal code: A81. ISSN: 0940-5437.

L13 ANSWER 8 OF 11 CANCERLIT DUPLICATE 3

TI Analysis of gp39/CD40 interactions using \*\*\*molecular\*\*\*

\*\*\*models\*\*\* and site-directed mutagenesis.

AU Bajorath J.; Marken J.S.; Chalupny N.J.; Spoon T.L.; Siadak A.W.; Gordon M.

SO BIOCHEMISTRY, (1995). Vol. 34, No. 31, pp. 9884-92.  
Journal code: A0G. ISSN: 0006-2960.

L13 ANSWER 9 OF 11 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE

TI Identification of residues on CD40 and its ligand which are critical for  
the receptor-ligand interaction

AU Bajorath J.; Chalupny N.J.; Marken J.S.; Siadak A.W.; Skonier J.; Gordon  
M.; Hollenbaugh D.; Noelle R.J.; Ochs H.D.; Aruffo A.

SO Biochemistry, (1995), 34/6 (1833-1844)  
CODEN: BICHAZ ISSN: 0006-2960

L13 ANSWER 10 OF 11 Elsevier BIOBASE COPYRIGHT 2000 Elsevier Science B.V.

TI Comparative \*\*\*molecular\*\*\* \*\*\*modelling\*\*\* of the Fas-ligand and

other members of the TNF family

AU Peitsch M.C.; Tschopp J.

SO Molecular Immunology, (1995), 32/10 (761-772)  
CODEN: IMCHAZ ISSN: 0161-5890

L13 ANSWER 11 OF 11 CANCERLIT

TI Central role of CD40 and its ligand in B lymphocyte responses to  
T-dependent antigens.

AU Gordon J.; Katira A.; Holder M.; MacDonald I.; Pound J

SO CELLULAR AND MOLECULAR BIOLOGY, (1994). 40 Suppl. 1, pp. 1-13.  
Journal code: BNA.

=> d ti au so abs kwic ll

L13 ANSWER 11 OF 11 CANCERLIT

TI Central role of CD40 and its ligand in B lymphocyte responses to T-dependent antigens.

AV Gordon J; Katira A; Holder M; MacDonald I; Pound J

SO CELLULAR AND MOLECULAR BIOLOGY, (1994). 40 Suppl. 1, pp. 1-13.  
Journal code: BNA.

AB In order to mount an effective antibody response to soluble and certain other types of antigens, B cells need help from T cells. Recently, an important receptor-ligand pair has been identified as essential for successful cognate interaction between these two classes of lymphocytes. CD40 was first identified as a receptor-like molecule on B cells which when ligated by antibody could deliver signals to prime for growth, differentiation, or survival. Later its counterstructure--termed \*\*\*CD40\*\*\*--ligand\*\*\* ( \*\*\*CD40L\*\*\* )--was discovered to be an inducible type II glycoprotein of helper T cells. In this review, the central role of the CD40- \*\*\*CD40L\*\*\* interaction in the various phases of the B cell response to T-dependent antigens is discussed drawing from both in vitro and in vivo studies.

AB . . . B cells which when ligated by antibody could deliver signals to prime for growth, differentiation, or survival. Later its counterstructure--termed \*\*\*CD40\*\*\*--ligand\*\*\* ( \*\*\*CD40L\*\*\* )--was discovered to be an inducible type II glycoprotein of helper T cells. In this review, the central role of the CD40- \*\*\*CD40L\*\*\* interaction in the various phases of the B cell response to T-dependent antigens is discussed drawing from both in vitro. . .

CT

Dendritic Cells: IM, immunology

Ligands

Lymphocyte Transformation

Membrane Glycoproteins: CH, chemistry

Membrane Glycoproteins: IM, immunology

Mice

Mice, Knockout

Models, Biological

\*\*\*Molecular\*\*\*

\*\*\*Structure\*\*\*

Mutation

T-Lymphocytes, Helper-Inducer: IM, immunology

Transforming Growth Factor beta: IM, immunology

RN \*\*\*147205-72-9 (CD40L)\*\*\*

=> d hist

(FILE 'HOME' ENTERED AT 10:56:25 ON 15 SEP 2000)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, LIFESCI, SCISEARCH, TOXLINE, CABA, BIOTECHNO' ENTERED AT 10:56:29 ON 15 SEP 2000

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SEA PEITSCH M7/AU AND CD40

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2 FILE CANCERLIT  
4 FILE CAPLUS  
0\* FILE CIN  
0\* FILE DRUGLAUNCH  
0\* FILE DRUGMONOG2  
0\* FILE DRUGNL  
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1 FILE ESBIODASE  
0\* FILE FOREGE  
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4 FILE MEDLINE  
0\* FILE PHAR  
0\* FILE PHIC  
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6 FILE SCISEARCH  
0\* FILE CBNB  
0\* FILE USAN  
L4 QUE PEITSCH M7/AU AND CD40

FILE 'BIOTECHNO, CANCERLIT, ESBIODASE' ENTERED AT 11:05:00 ON 15 SEP 2000

L5 5 S PEITSCH M7/AU AND CD40  
L6 4 DUP REM L5 (1 DUPLICATE REMOVED)  
L7 2 S L1 AND ( (THREE (W) DIMENSIONAL (W) STRUCTURE?) OR ((3D OR 3(  
L8 2 S L1 AND ( (THREE (W) DIMENSIONAL (W) STRUCTURE?) OR ((3D OR 3(  
L9 2 S L1 AND ( (THREE (W) DIMENSIONAL (W) STRUCTURE?) OR ((3D OR 3(  
L10 4 S L1 AND ( HOMOLOGY (5W) (MODEL? OR STRUCTURE?) )  
L11 2 DUP REM L10 (2 DUPLICATES REMOVED)  
L12 16 S L1 AND ( MOLECULAR (5W) (MODEL? OR STRUCTURE?) )  
L13 11 DUP REM L12 (5 DUPLICATES REMOVED)